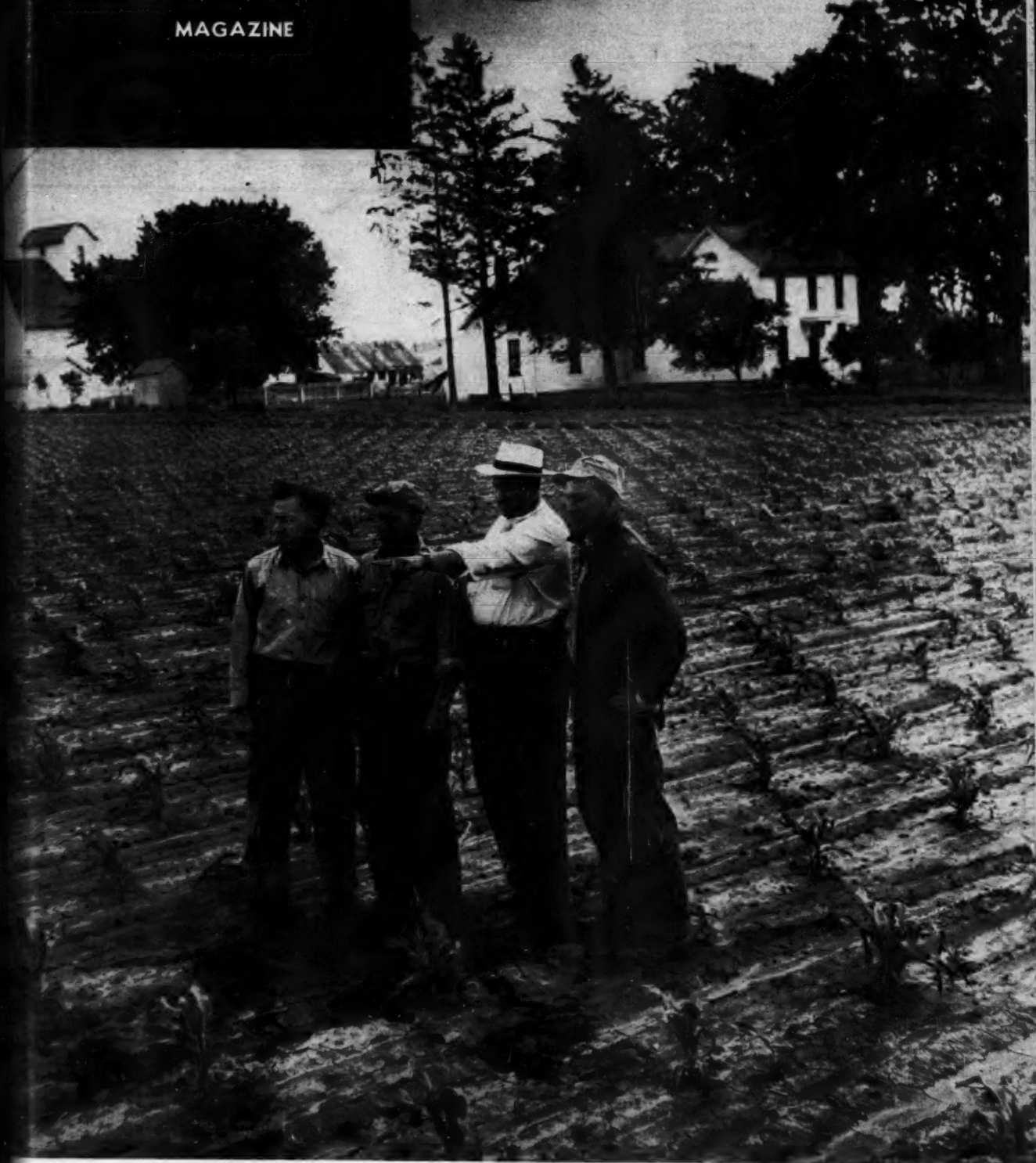


THE

agricultural education

MAGAZINE



Instructor and farm adviser discuss cultivation plans with veteran trainees.
Photo by Northern Illinois Farm Life.

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Editorial Comment

Adult education in the adjustment period



J. N. Weiss

HAVE you taken an inventory of your program in agricultural education? If so, what is its status? Are your programs in agricultural education now available to all persons in your community who are interested in the systematic study of current local, state, national and world agriculture?

A tremendous impetus was given to adult education during the war years because of the great demand for increased food production and by the one hundred per cent reimbursement to local schools from federal funds. Since the National Defense, Rural War Production, and Food Production War Training Programs have been discontinued there is an ever greater need for adult education in agriculture.

Recent observations would lead one to think that teachers of vocational agriculture and school administrators are inclined to center their attention now upon the high school and veterans' education programs to the neglect of the older adult farmers who have heretofore been enrolled in evening classes. Is it true that farmers are now so prosperous that they no longer feel the need for training? Can it be that farmers have no problems? Some people have accepted the "camel's hump" concept of education, whereby knowledge is stored for future use as water is stored by the camel. Fortunately the majority subscribe to the theory that education is a continuous process of mental development which "starts in the cradle and ends with the grave." It implies the awakening of undeveloped powers in farmers themselves, throughout life. Recent developments in agricultural science, atomic power, mechanization of farms, organization and operation of farms, production, marketing, and distribution of farm products have presented a real challenge as well as opportunity for teachers to provide and expand the education available to adults. Farmers' annual net income may not be as great in the future as it has been in the last few years, yet taxes will of necessity continue to be high. Many farm homes today are without modern facilities and conveniences. The health of farm people is on the average poorer than their urban neighbors. There is need for establishing a food surplus supply for starving countries. All areas are faced with the necessity for maintaining a permanent system of soil fertility. With such problems facing farmers it seems that the organized class work for adults is essential in this readjustment period.

The Advisory Council

Progressive teachers of adults in many states have used seven to twelve representative farmers in the community as an advisory council to determine farmer needs and interests. Later this group assists the teacher with the planning and the organizing of the courses of instruction based upon the objectives or goals to which the group, as a whole, is willing to subscribe. The advisory council members secure the enrollment of adults, decide what should be taught, evaluate the results obtained, and suggest activities for group participation. Their recommendations include suggestions for an integrated program for the high school pupils, the veterans' classes, and the young farmers.

We might say that the public schools have not only an opportunity, but a responsibility to provide education to meet the needs of adults in the local community. If this challenge is met the establishment of the necessary training programs will help to build a prosperous peace-time economy.

—J. N. Weiss, University of Illinois.

The A. V. A. Convention

THE SETTING of the A. V. A. convention, which was held at Los Angeles, December 15-18, provided opportunities for persons interested in agricultural education to acquaint themselves with the operation of a program in a state with intensive and diversified types of farming. A major portion of the San Fernando Valley lies within the City of Los Angeles and as a result instruction in agriculture is emphasized beginning at the elementary level and extending through the junior college. The agriculture group had the use of the Sun-kist building and much of the sectional program was centered about the cooperative movement.

Even the sectional programs of the annual convention are subdivided with the result that no person can take advantage of the total program in agricultural education. The meeting of the agricultural research committee is ordinarily held, however, before any of the general sessions or other sectional meetings in agricultural education are scheduled. Interest in research as related to agricultural education is being revived and considerable activity is being projected by states and on the regional basis. There is some agitation for evaluating the program of Institutional-on-Farm Training and for having the Agricultural Education Service in the U. S. Office of Education devote more attention to research.

Much attention in the sub-sectional meetings for the supervisors was centered on current problems pertaining to veterans' education. At their annual breakfast the teacher trainers heard a scholarly presentation by R. H. Palmer of Montana State College pertaining to selection and guidance of students in agricultural education. A second sectional meeting of this group was highlighted by an extensive paper prepared by Professor H. H. Gibson of Oregon State College in which he analyzed the effectiveness of training programs which he had observed during a tour through several states. The group was concerned otherwise with problems pertaining to the training of special teachers of veterans as revealed in a survey made by V. G. Martin of Mississippi State College, and in attempting to define through the medium of a panel presentation some of the current problems in teacher education.

Several state associations of teachers of vocational agriculture sent representatives to the convention and these teachers together with other teachers from California and nearby states were active in all meetings of the agricultural section. A special meeting of the teachers provided for an exchange of experiences and for discussing the possibility of organizing on a national basis.

A Young Farmer symposium involving representatives of California and Utah Y. F. A. chapters featured the final meeting and proved to be one of the outstanding contributions of the agriculture section during the convention. The participants have made considerable progress in farming and are leaders in their communities. The attendants were impressed with the program for which the Young Farmers in the two states are responsible. They raised some questions as to the relationships which organizational objectives should have to systematic instruction for young farmers. They are aware of the consideration which should be given to the Y. F. A., but in at least some cases are undecided as to the advisability of encouraging the establishment of a national organization to pool the interests of local and state groups.

Genuine Hospitality

No little responsibility can be assigned to the host state for the success of the convention. The local teachers of vocational agriculture, the state supervisory staff and the teacher trainers are imbued with the state pride which is characteristic of Californians. To these groups recognition is given for acquainting visitors with the agricultural program in the area, for keeping open house at the California Polytechnic School, and for helping make the visit of their guests informational and enjoyable.

Farmer Classes

R. B. DICKERSON

J. N. WEISS

How an adult farmer program works in one Missouri school

JIM EVANS, Teacher, St. Charles, Missouri

ONE of the chief functions of vocational agriculture is to train present and prospective farmers for proficiency in farming. The doors of the agriculture department should always be open where farmers may meet and have modern and approved practices explained to them.

At St. Charles, we conduct classes annually for adult farmers with ten or twelve meetings held at weekly intervals. The primary objective for these short intensive courses is to help farmers with their immediate problems.

We begin our adult farmer classes the first week in December. No session is held Christmas week. Classes usually close around the last week in February or the first week in March. In this area wheat is sown, soybeans are combined and corn is picked all before December 1st. Spring work usually does not get started before the last of February or the first of March. We usually hold one or more follow-up meetings in the spring or summer.

Classes Throughout Area

When only one adult farmer class is held, the lessons are given at the vocational agriculture building. However, we usually hold at least three classes for adults during the winter. In most instances, these are held in various parts of the community rather than at the school. We have found that rural schools make splendid centers for adult farmer classes. Unless assistance is provided, I do not hold more than two adult farmer and one young farmer classes during the year.

Some teachers desire to have large enrollments, but we would rather have a small group of persons who are really interested than extremely large groups. We like to have a class of 10 to 20 that attend every meeting rather than seventy-five or a hundred that only attend 30 per cent of the meetings.

All of our adult farmer meetings start promptly at 7:30 P. M. during the winter. Farmers prefer evening meetings in order that they may work at home during the day. On the other hand, our follow-up meetings are held during the day. These follow-up meetings are usually held in the community and ordinarily involve soil and plant tissue tests, demonstrations, and tours.

All adult farmer classes are held at the insistence of the farmers. Matters concerning the securing and recruiting enrollment, unit to be studied, time and place of meeting are decided upon by the group. Each class selects its own chair-

man and secretary. In the rural districts, the farmers arrange for the heat and lights; at the central school, the custodian for the agriculture building takes care of these matters.

In securing and recruiting enrollment, the group of farmers interested in getting the class started usually make personal solicitations, ask our Future Farmer members to tell their parents and neighbors, make telephone calls, make announcements through rural schools, send cards, and place articles in the newspapers.

Many times our department sends out a circular explaining the type of course which the farmers have suggested. The farm leaders usually furnish us with a mailing list.

Advisory Board

We have an advisory board for vocational agriculture. Two men representing each of the following phases of agriculture make up the membership of this board: agricultural economics, agricultural engineering, beef husbandry, dairy husbandry, field crops, horticulture, poultry husbandry, sheep husbandry, soil and water management, swine husbandry and veterinary science. Each of these men is a recognized authority in his particular field. The instructor, with the aid of this advisory board, works out the jobs, problems, teaching aids and devices for the particular course chosen by the adult farmer group. This makes seven years that we have been conducting adult farmer classes at St. Charles, and the farmers usually inform us at the last meeting the subject they want to study the coming winter. This gives us a year in which to secure information and materials.

We use the following procedure in conducting our adult classes:

- 7:30 p.m.—Call to order by chairman
Roll call by secretary
- 7:35 p.m.—Announcements of local interest
- 7:40 p.m.—Reports of committees on problems from last meeting
- 7:45 p.m.—Review sheet of last meeting distributed and discussed
- 7:55 p.m.—Discussion of topic led by agricultural instructor
- 9:25 p.m.—Topic for next meeting announced and study materials distributed
- 9:30 p.m.—Closing of meeting by chairman

In conducting the class, the agricul-



Four of the farmers enrolled in the class at the Lake View rural school watch the instructor make plant tissue tests.

tural instructor leads the discussion with the understanding that the class members may ask questions at any time. Ample use of the blackboard is made and demonstrations are used frequently.

The members of the F.F.A. committee on community service generally help with setting up the screen for motion pictures, putting on demonstrations, and other similar tasks.

All recreation is withheld until the last meeting. This meeting is usually devoted to a summarization of the course and a question box. At this last meeting, the farmers bring their wives and children, as does the instructor. Light refreshments are served.

Attendance certificates are awarded to the students on the last night of the school. These are furnished by the State Department of Education and are signed by the State Director of Vocational Education, the State Supervisor of Agricultural Education, the local Superintendent of Schools and the local Instructor of Vocational Agriculture.

Follow-up Visits

During the months between classes farm visits are made with the enrollees. We do not dictate to the farmer how to do his work but rather we tell him of the recommendations of our local advisory board for vocational agriculture.

For a department of vocational agriculture to render the greatest service to a community there are some things that I consider essential. First, the instructor must be free to devote his entire time to conducting a comprehensive agricultural program. *He must by all means not be handicapped by being tied down with a lot of non-agricultural duties.*

Second, the training program should fit the needs of the community. It is necessary that there be a well-qualified advisory board for vocational agriculture. This board will see that the program of work of the department in the community is practical and that it meets the needs of the community. With a practical program in operation in the community, the department has the support of patrons in the area.

Principles of cooperation helpful to Utah Young Farmers

MARK NICHOLS, State Adviser, Utah Young Farmer Association, Salt Lake City



Mark Nichols

COOPERATIVE effort plays an important role in the activities on any Young Farmer group when a yearly program of work is planned. Cooperation in both the social and economic fields rounds off the sharp corners of the human personality and makes

for a polished gentleman as its end product. After all, cooperation involves a quality of mind and soul which, like the muscles of the body, have to be exercised constantly in order to function in terms of maximum efficiency. Utah Young Farmers are learning this lesson in their activity programs. "We learn to do by doing" applies to the learning of cooperative principles just the same as other types of learning in vocational education.

Projects Involving Cooperation

A number of Utah Young Farmer chapters have conducted projects involving cooperative effort during the past year. Following are some which are typical:

The Young Farmers of South Emery



Members of the Bear River chapter of Young Farmers make many manure loaders such as this one by cooperative effort in the farm mechanics shop of the local high school.

chapter at Ferron live in close proximity to a national forest and privately owned timber lands. Lumber for farmstead buildings has been hard to obtain. These young men felt that they could help solve their problem by pooling their funds and purchasing a saw mill outfit. Accordingly, this equipment was purchased cooperatively and the young men plan on logging out the necessary timber to meet their building needs. Small groups will work together in getting this job accomplished.

This chapter has already made exten-

sive cooperative purchases of alfalfa seed, which was used in spring plantings on their farms.

The Bear River chapter at Tremonton for a number of years has carried on a program filled with cooperative effort. One of its main projects was the formation of a potato marketing cooperative and the construction of a \$30,000 potato cellar. These young men made their own potato washer and grader in the school farm shop. During the present year, they have made extensive cooperative purchases of building materials, including a few carloads of cement.

Many Utah Young Farmer chapters have pooled the interests of their members in the purchasing of war surplus materials. Purchases amounting to many thousands of dollars have been made by several chapters.

Approximately twenty Young Farmer chapters in Utah have constructed paint spray guns. Compressors and motors were purchased from W.A.A. in many instances. The Young Farmers mount the compressors and equipment on an auto chassis or trailer, which can be trailed behind an automobile. These paint spray guns were rigged up in the school farm shops by the Young Farmers themselves. They usually have two spray leads and do an extremely fast job. All of the buildings of the farmstead can be painted in a day by two

operators. Such a procedure has made possible the cooperative purchase of paint, oil, and lead in large quantities and at a considerable financial saving to the Young Farmer members. Several hundred Utah farmsteads have received a face lifting this year as a result of this Young Farmer cooperative activity.

Utah has several state wide or area wide farm cooperatives. Utah Young Farmers have spent considerable time in their meetings studying the organization and function of these cooperatives, which do business in their communities.

Soil testing clinic for farmers

VERNON V. LUTHER, Teacher, Neponset, Illinois



Vernon V. Luther

MANY high school departments of vocational agriculture do test soils. What results are accomplished? You can probably think of different systems, but I would suggest a soil testing clinic for farmers as one method.

A soil testing clinic might be compared to a medical clinic. Just as people are examined for illness, soil should be examined for its weaknesses. How to operate such a clinic might be explained best by summarizing the one that was held at the Neponset High School this fall.

One day was devoted to testing soils for farmers in the community. A mimeographed letter was circularized about two weeks before requesting farmers to bring samples of soil to the clinic. The letter also explained: (1) how to take the samples; (2) to air dry samples; and (3) to make a map or chart of the field. This event was also publicized in the local newspaper.

On the day the clinic was held, the agriculture room was turned into a laboratory and display room. The testing laboratory was set up in one corner of the room and organized to systematically test for acidity, available phosphorus and available potassium and to record the results.

The results of the tests were placed on a special form and then interpreted to the farmer. Fertilizer recommendations were made if necessary.

Besides the testing, there were samples of fertilizer, fertilizer bags, and lime, on display; samples of soil classes; and a rock collection all with explanatory labels.

One part of the room was devoted to soil conservation. Many educational posters were displayed with such equip-

(Continued on Page 151)

As a result, many of them are becoming affiliated with the cooperatives and receiving the benefits of the same. The Utah Coop, Utah Poultry Producers Cooperative Association, Weber Central Dairy, Highland Cooperative Milk Producers, and others have many Young Farmers as members.

The cooperative way of doing business is, therefore, receiving considerable attention by Young Farmers in Utah. Much more, however, can be done than has heretofore been accomplished. Cooperation makes progress only as fast as Young Farmers and others understand the principles under which a cooperative operates. It is, therefore, a problem of education, and Utah Young Farmers believe in this type of education.

Farm and home records for veterans

MAX HIRSCH, Instructor, K. L. RUSSELL, Supervisor, Neosho, Missouri

PERHAPS the basic consideration in establishing a sound program for training farm veterans in Institutional On-Farm Training is the one of keeping accurate, complete, and comprehensive farm and home records.

Upon entering training a veteran must make a detailed farm and home plan. Without accurate records too much of this planning is estimation and guesswork and cannot be considered as a basically sound operating plan for a period of longer than six months. With records that have been conscientiously and correctly kept by the veteran and systematically checked by the instructor a veteran can, at the end of six months, begin to formulate farm and home plans which are based upon actual performance. Such a plan can be of real value in guiding future activities of the veteran in his farming program. As records are continued the farm and home plan should be revised and developed into a sound working schedule for the operation of the farm and home business. In revising the farm and home plans the records should be analyzed to determine the practices that are sound and for those which are losing money.

Use of Records in Teaching

Complete and accurate records can prove an invaluable guide to the instructor as teaching material for his classroom program. Part of each class period should be devoted to the study and preparation of the farm and home records as it is essential that records be kept up to date at all times if they are to present an accurate picture of the farm business. As the veteran learns to keep his farm accounts less class time should be devoted to actual record keeping and more time to analysis. This does not reduce the need, however, for systematic checking of the records on the part of the instructor. Records that are not analyzed at least once each month lose a great deal of their practical value to the veteran and the instructor. The analyses of the records require the use of a monthly summary sheet which includes items which are essential to the study of the farm business. This analysis sheet will vary in different farming situations but in all cases will include a detailed breakdown of the sources of income, farm expenses, family expenses, and capital expenditures. In order to check the accuracy of the records for the period involved it is necessary to know the cash on hand at the end of each month. The cash inventory at the end of the month makes it possible to check the accuracy of the record keeping and to account for any change in the financial status of the veteran.

For reporting purposes to the Veteran's Administration records are necessary. In order to comply with the terms of the law a report of earnings is filed periodically. These reports include the

amount of the net farm earnings and an estimate of earnings for the succeeding months.

In order that records may be kept accurately it should be a family enterprise. In other words, all members of the

family should actively participate in the keeping of the farm and home records. Record entries should be made on a daily basis and preferably at a fixed time and place.

With these records available the instructor can do a worthwhile job of teaching good farming methods and the veteran will not be in a position of groping about in the dark as far as knowing his farm and home business accomplishments and his future possibilities.



Veterans at Neosho use records in planning farming programs.

RECORD BOOK SUMMARY FOR MONTH OF _____ 1948

Name _____

FARM INCOME

1. Crops (kind) _____ (Amt.) _____ \$ _____
2. Milk _____ (lbs.) _____ \$ _____
3. Eggs _____ (doz.) _____ \$ _____
4. Poultry _____ (head) _____ (lbs.) _____ \$ _____
5. Cattle _____ (head) _____ (lbs.) _____ \$ _____
6. Hogs _____ (head) _____ (lbs.) _____ \$ _____
7. Income from _____ \$ _____
8. _____ \$ _____
9. **FARM INCOME TOTAL FOR MONTH** \$ _____

FARM EXPENSES

10. Feed expense (lbs.) _____ \$ _____
11. Crop expense _____ \$ _____
12. Machinery repair _____ \$ _____
13. Auto expense (farm use) _____ \$ _____
14. Tractor and truck _____ \$ _____
15. Building and land upkeep _____ \$ _____
16. Misc. livestock expense _____ \$ _____
17. Hired labor (hrs.) _____ \$ _____
18. Taxes and insurance _____ \$ _____
19. Rent and other _____ \$ _____
20. **Total Farm Expenses** _____ \$ _____

21. **NET FARM INCOME (taxable) (item 9 minus 20)** _____ \$ _____

FAMILY EXPENSES

22. Truck and auto (personal use) _____ \$ _____
23. Food _____ \$ _____
24. Clothing _____ \$ _____
25. Personal _____ \$ _____
26. Medical care _____ \$ _____
27. Other family expense _____ \$ _____
28. **Total Family Expense** _____ \$ _____
29. **Total Farm & Family Expense (line 20 plus line 28)** _____ \$ _____
30. **Net Income (subtract total Farm & Family Expenses (29) from total Farm Income for month (9))** _____ \$ _____

CAPITAL EXPENDITURES

31. Investments, bonds bought, money loaned _____ \$ _____
32. Building _____ \$ _____
33. Livestock _____ \$ _____
34. Machinery and farm equipment _____ \$ _____
35. Household equipment _____ \$ _____
36. Debt payments _____ \$ _____
37. Land improvement _____ \$ _____
38. **Total Capital Expenditures** _____ \$ _____

(Continued on Page 147)

Providing individual instruction for veteran farm trainees

CHARLIE MILLER, Veterans Instructor, Fallon, Nevada

IN THE veteran training program the making of farm visits is a major responsibility of the agricultural teacher. The problem the teacher has to solve is what to teach on these visits to the farm. First, he must become acquainted with where the veteran lives. As the teacher travels he finds out what enterprises exist in the community. The major enterprises I found in the Fallon area were beef, dairy, sheep, swine, poultry, turkeys, wheat, barley, rye, oats, corn and alfalfa. The minor ones were sheep, poultry, turkeys, rye and oats.

In my farm visits I try to develop understandings of what the veterans' program will do to help the young farmer in getting established. The veteran should be encouraged to ask questions on problems for which he needs help. When making the first visit to the farm, the teacher should become acquainted with the family and study how home conditions can be improved with just a little effort on the part of the veteran. In some cases improvement projects such as putting in a lawn, a few shrubs, a water system, and painting the house may make for better home life. On the farm small improvements can be made, for example, putting in irrigation boxes, pasturing ditches, and weed control. These improvements make for convenience as well as improving the value of the farm.

Accurate Records Kept

Record keeping is an important part of the instruction to be provided and the records should be kept accurately. A detailed study of the record book should be made in the classroom before launching the veteran into any system of keeping records. They should be checked once a month by the instructor to make sure all entries are properly recorded and up-to-date. This enables the veteran to determine his profit at any time.

Individual and group instruction should be provided for simplifying farm record keeping. Where a group of farmers live close together their problems should be worked out at a central place.

Each student should hand in a list of jobs for which he needs help. This will assist the teacher in planning on-the-farm instruction at a time when it will

be most convenient for the trainee, and the student should be notified in advance when the visit will be made. While on the farm the teacher may see things that can be improved and should discuss these improvements with the veteran in order that a systematic plan can be worked out for doing the various jobs over a period of years. An opportunity to praise the veteran for doing good work should never be overlooked.

Veterans Assist With Visits

Veterans should be assisted on farm visits in establishing goals for their enterprises, viz.:

1. Increase the number of pigs per litter to 8
2. Average weight at 56 days 50 lbs.
3. Average litter weight at 56 days 400 lbs.
4. Average pounds of pork per sow at six months 2000 lbs.
5. The number of days required to develop for market 170

The progress of the trainees should be checked at frequent intervals. In going over their farm surveys the teacher will be able to see if the trainees are accomplishing what they set out to do. By establishing goals for each enterprise the trainee will know where he is going and his progress can be measured in terms of accomplishments.

According to G. C. Cook* self-evaluation is desirable and the following is suggested for the trainee:

1. Am I following a good plan?
2. Am I doing all I can to make me a better farmer?
3. Am I giving proper thought for expanding my farming program?
4. Am I trying to receive all the information I can to do a good job of farming?
5. Am I reading all the good articles on farming I find that may help me as a farmer?

Cook also suggests that the teacher make a self-evaluation of his instruction:

1. Have I planned my visits beforehand?
2. Have I made a list of problems that students need help with?
3. Have students handed in a list of the jobs they need help with?

4. Have I helped students to solve their problems?

Farm mechanics is an integral part of the training program. It includes all the unspecialized mechanical activities that a progressive farmer should perform on his farm with the kinds of tools and equipment he has available. A good farm shop will add to the success of the farming operations and should not be overlooked in the improvements being planned for each veteran trainee's home farm.

Problems in Farm Mechanics

A few of the special problems in farm mechanics which the veteran will need help in doing on the farm are as follows:

1. Farm power and machinery
 - a. Farm motor repair
 - b. Trucks and tractor maintenance
 - c. Selecting farm machinery
 - d. Constructing labor saving devices
2. Concrete work
 - a. Setting forms
 - b. Mixing concrete
 - c. Pouring and curing cement
3. Farm Buildings
 - a. Construction and repair of farm buildings
 - b. Painting farm buildings
4. Home Farm Conveniences
 - a. Selecting and using plumbing equipment
 - b. Installing and repairing plumbing equipment
 - c. Establishing a farm water supply
 - d. Establishing a farm sewage disposal system
 - e. Heating the farm home
5. Welding
 - a. Acetylene and arc welding
 - b. Selecting the type of units for the farm
6. Simple electricity
 - a. Determining source of power
 - b. Choosing the right sizes and grades of wiring for farm buildings
 - c. Installation of fuse boxes, switches and wiring

In addition to assisting the veteran trainee with his farm mechanics program on the home farm and in establishing goals for individual enterprises an improvement program for soil and water management and plans for the processing of farm products should be developed.

The above practices have been helpful in providing individual instruction to certain trainees enrolled for the Institutional-on-Farm Training program at the Churchill County High School, Fallon, Nevada.

Kansas has always been proud of the boast that 100 per cent of the local officers comprising the Kansas Association of F.F.A. can creditably open and close a formal F.F.A. meeting without the use of the F.F.A. Manual.

A series of 10 leadership training schools for officers and F.F.A. members were held in Wisconsin during the months of October and November. Mr. Randall Swanson, state farm safety specialist, made a contribution to each of the meetings.

*Cook, Glen C., "A Handbook on Teaching Vocational Agriculture," Interstate Publishing Co., 1947.

RECORD BOOK SUMMARY (continued from page 146)

OTHER INCOME

| | |
|-------------------------------|----|
| 39. Income not from farm..... | \$ |
| 40. V. A. payments | \$ |
| 41. Money borrowed | \$ |
| 42. Other Income Total..... | \$ |

INCOME

| | |
|-------------------|----|
| Cash on hand | |
| 1st of month..... | \$ |
| Farm income..... | \$ |
| Other income..... | \$ |

A. Total available to spend.....\$

EXPENSES

| | |
|--|----|
| Farm expense..... | \$ |
| Family expense..... | \$ |
| Capital expenditure | \$ |
| Cash on hand | |
| end of month..... | \$ |
| Unaccountable | \$ |
| B. Total expenses plus cash on hand..... | \$ |

Line A and line B must balance.

Methods and Materials

G. P. DEYOE

Guidance and orientation for the curriculum in vocational agriculture

W. A. SMITH, Teacher Education, Cornell University, Ithaca, New York



W. A. Smith

BOYS and girls have need for assistance in choosing a curriculum to follow in the secondary school. This need is quite likely to be especially true in the case of choice of vocational curriculums. As a rule the time when such as-

sistance may be given most appropriately, with reference to the curriculum in vocational agriculture, is during the junior high school period of grades seven, eight and nine. At this time the school should provide opportunity for the pupil to discover his interests, needs, abilities and opportunities for vocational preparation in agriculture such as the high school provides.

Aims and Functions

Most, if not all, rural pupils in high schools having the curriculum in vocational agriculture as a part of the school program of studies, have and will continue to have a close association with agriculture either as producers or consumers. Most of the boys and some of the girls, whether or not they reside on farms, should be helped to develop understanding and appreciation of the importance of agriculture, particularly farming, in their lives as present and future producers and consumers. Such knowledge and understanding when supplemented with or acquired by supervised participation in plant and animal production and in construction, repair, and maintenance activities appropriate to the home and farm is essential if the pupil is to obtain guidance and orientation regarding the agriculture curriculum.

The supervised participation so essential in the pupil's program may be expected to lead, for some pupils, to a well founded choice of the curriculum. In such cases the participation in plant and animal production and in repair, construction, and maintenance grows into a program of preparation for farming to be continued and expanded during the high school period. For other pupils who may choose not to continue into the vocational agriculture curriculum, the par-

ticipation experienced in agriculture may well result in the development of avocational interests and abilities of value in their present and future lives.

From the above it may be concluded that the aim of agricultural studies in the junior high school years is to provide an opportunity for study and experience *to enable pupils to make an intelligent choice regarding the selection of the vocational agriculture curriculum.* To achieve in this direction, these studies in agriculture should perform the following functions for the pupils: (1) develop understanding and appreciation of the importance of agriculture, particularly farming, in the present and future living of the pupils as producers and consumers; (2) develop interests and abilities in plant and animal production; (3) develop skills and abilities in construction and repair appropriate to the home and farm; and (4) (for those who choose to continue into the vocational agriculture curriculum) provide a start in a program of preparation for and establishment in farming.

Suggested Units of Study

Units in agriculture at this level require adaptation to individual school and individual class and pupil situations. Some of the factors which need to be taken into account in choosing and arranging these units in a given school are: the extent to which similar content is included in other courses such as social studies, industrial arts, and general science; the relation of the course to other guidance activities in the school; the characteristics of the pupils enrolled; the grade level at which the course will be administered; and the facilities available for instruction. Following are suggestions for appropriate units to be included in the study of agriculture in the junior high school years and from which selection should be made.

1. What use is made of land at home, in our community, in the State, in the United States?
2. What do we produce and in what quantity at home, in our community, in the State, in the United States? How does the production at home compare with that obtained by the most successful farmers in the area?
3. What is the value of the products we produce at home, in our community, in the State, in the United States?
4. What becomes of the products we produce at home and in the community?

5. What is farming? What kinds of farming do we have in our community, in the State, in the United States?
6. What kinds of soil do we have at home, in the community, and in the State?
7. What factors influence the location of the different kinds of farming in our community, in the State, in the United States?
8. What are the opportunities for me to get started in the development, maintenance, or improvement of crops, livestock, or facilities? (At this point early in the course it is expected that each member of the class will select one or more project activities in keeping with his interests, opportunities, abilities and needs.)
9. What problems must I solve to develop, maintain, or improve the crops, livestock, and facilities which I choose as projects? (Those problems to be solved by the boy in keeping with the level of his abilities, opportunities and needs, should constitute the outline for the technical agricultural content of the program. These problems provide the units of instruction in technical agriculture. They should be studied at a time and in such manner as to enable the pupils to make their plans for solving problems as they arise.)
10. What records should I keep and how shall I keep and use them?
11. What are the occupations in which people of our community engage and how many persons are engaged in them?
12. Which of these occupations are related to farming and how?
13. For which occupations would a knowledge of farming be desirable? For which would a preparation for farming be desirable?
14. In what ways do the occupations of the community depend upon farming and how is farming dependent upon other occupations?
15. How does farming compare with other occupations as a way of living?
16. How does farming compare with other occupations in economic return?
17. How are farms organized: their layout, equipment and capital needs?
18. What are the items of cost or expense in the operation of a farm business? How do these costs differ in importance between kinds of farming with which we should be acquainted?
19. What services are desirable to be performed by the farmer for the consumer?
20. What service agencies are available to the farmer and what services do they provide?
21. What changes are taking place in farming?
22. What personal qualifications are necessary for success in farming?
23. What preparation is desirable for success in farming?
24. What are the opportunities for preparation for farming?
25. What are the opportunities for becoming a successful farmer?
26. For what kind of farming shall I prepare? What are the enterprises which make up such a farm business?
27. Where shall I farm?

*Based upon an address delivered before the 36th Annual Summer Conference of the Massachusetts Association of Agricultural Instructors and Directors, July 21, 1947.

28. What are the problems involved in conducting such a farm business which I will need to solve to succeed in farming?
29. What facilities are available to help me solve these problems?
30. What is to be my program of preparation for and establishment in farming? (Emphasis here is upon the supervised farming program as evidence of intention to enter the vocational agriculture curriculum.)

The following units in farm and home construction, repair, and maintenance are suggested as appropriate for pupils at the junior high school level and are in keeping with the aim and functions of agricultural studies for these pupils. Insofar as possible, they should relate to the project activities of the pupils as chosen early in the course.

- Safety in the shop.
- Identification, purpose and use of common tools.
- Reading simple drawings and making working sketches.
- Tool fitting, sharpening, repairing, adjusting, cleaning, and care.
- Elementary woodworking operations—sawing, nailing, planing, squaring, measuring, etc.
- Calculating board feet, cost of materials, size of pulleys, and various dimensions commonly used on farms and in homes.
- Painting and glazing, care of paint brushes, preparation of surface, selection of paint, mixing, application.
- Rope splicing, knot tying, crowning and whipping, care of rope.
- Metal work—identification and use of tools and materials, riveting, soldering, forging.
- Care and repair of harness.
- Elementary electrical repair—replacing fuses, repairing electric cords.
- Elementary plumbing activities—repairing a faucet, pipe fitting, cleaning drains.
- Farm and home safety.
- Fire prevention.

Junior High Projects

Listed below are some of the common farm enterprises which furnish project activities appropriate to the interests, needs and abilities of pupils at the junior high school level. The phases of these enterprises which are commonly used for projects are outlined as suggestions to teachers of the problems from which instructional content may be drawn. In some communities other enterprises not listed may be desirable. The amount of time to be devoted to each enterprise in class will depend upon the needs and abilities of the pupils in their projects and the importance of the enterprise in local farming.

1. **Poultry**
 - a. Selecting and obtaining stock
 - b. Incubating eggs
 - c. Brooding and rearing chicks
 - d. Feeding chicks and pullets
 - e. Caring for pullets on range
 - f. Growing broilers for market
 - g. Selecting birds for showing at local fairs
 - h. Selecting and managing pullets in the laying house
2. **Dairy cattle**
 - a. Selecting the calf
 - b. Feeding and caring for the calf
 - c. Preparing calf for show or sale
 - d. Testing milk of animals at home

3. **Small fruit crops**
 - a. Selecting kinds and varieties
 - b. Securing stock
 - c. Preparing land
 - d. Setting plants
 - e. Cultivating the crop
 - f. Controlling insects and diseases
 - g. Harvesting and marketing
4. **Home gardening**
 - a. Planning for the garden
 - b. Producing plants in hot beds and cold frames
 - c. Growing the garden
5. **Cultivated cash crops**
 - a. Determining what crops to grow
 - b. Selecting kinds and varieties
 - c. Providing for best type of seed
 - d. Preparing land for the crop
 - e. Fertilizing
 - f. Planting the crop
 - g. Caring for the crop
 - h. Harvesting and marketing
6. **Ornamental horticulture**
 - a. Making plan for care of lawn
 - b. Flower bed and shrub production and care
7. **Reforestation and tree planting**
 - a. Need for tree planting
 - b. Determining kind of soil
 - c. Selecting kind of trees to plant
 - d. Securing trees
 - e. Setting trees
 - f. Protecting planted area

Pupil Activity

It is accepted in modern educational procedure that pupils learn most readily when teaching is conducted by means of directed self-activities. This is particularly true in teaching pupils of junior high school age. It is expected that each pupil will select specific project activities involving the production of crops or animals or embracing some form of home or farm improvement. These projects undertaken by pupils should be selected as early as possible and be made the basis for the selection of content in the instructional program.

Attention of teachers and administrators is directed to the 4-H Club program of the Extension Service of the county and the desirability of close cooperation between the school and this agency in planning and carrying out the best educational program in agriculture for individual pupils in the junior high school. All project activities undertaken by pupils need to be given adequate supervision by the teacher of agriculture if the experience gained is to function in reaching the objectives of guidance and orientation in agriculture.

In addition to the opportunity for the necessary project activity for a pupil that may be found through the 4-H Club program, it should be possible to find activities which appeal to his interests, needs and abilities in his home situation or in situations available to him. This may be a neighboring farm. Most rural homes, whether village or in the open country, provide opportunity for crop and animal production in some form and offer problems in construction, repair, and maintenance. Among these opportunities will be small and tree fruits, home gardens, care of lawns and shrubbery, flowers, production of plants

for sale, production of vegetables for sale, production of poultry, pigs, cows, calves, horses and bees, construction of equipment, tool fitting, developing or improving a home shop, and others. *It must be remembered that any activity which will enable the pupil to increase his understanding of problems related to farming should contribute to his ability to make his choice regarding the vocational agriculture curriculum.* Furthermore, it may be the means of developing avocational interests and abilities in plant and animal production and in home improvement. Also, during the 9th grade year, pupils may well become active participants in the affairs of the local chapter of Future Farmers of America.

In addition to the individual project activities of the pupils, teachers must give attention to the planning and arranging for class activities for the entire group. Experiences in these activities and observations growing out of them may then be followed by discussions out of which conclusions and further planning should result. In planning these class-teaching activities, full advantage should be taken of the opportunities and resources of the community. Examples of such resources include the farms, the homes, processing plants, marketing agencies, selling agencies, banks, and service agencies. The relationship should be developed clearly between these class activities and the projects and other farm and home interests of the pupils.

Organization and Administration

The organization and administration of instruction such as proposed to serve as guidance and orientation for a particular curriculum will vary from one school to another according to such variable factors as size and organization of the school, the number of curriculums offered, the interests and needs of pupils as affected by their community environment, credit requirements in the school, and the basis upon which credit is granted. In general, it may be expected that an amount of time equivalent to one class period per day throughout a full year will permit organized instruction sufficient to achieve the desired purpose. It is presumed that such organized instruction will be supplemented by less organized forms of help to the student such as supervision of project activity, farm and home visits and other informal class and individual pupil activities.

Formal instruction might be organized for a single grade, or be distributed over more than one grade within the junior high school period. The latter plan has the merit of providing a greater time-span for the conduct of project activities and better seasonal distribution of instruction. In any case, the organization of the course should provide for making instruction as timely as possible in terms of the pupil's interests, needs and opportunities. Since prevocational instruction of this kind may be expected to lead to continuation into the vocational curriculum for at least some of the pupils, it should be administered at a time in the pupil's progress in school when he can continue on into the curriculum with a minimum of delay.

Professional

S. S. SUTHERLAND

B. C. LAWSON

Role of administration and supervision

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Harry E. Nesman

ADMINISTRATION and supervision have a very important role in the functional operation of an educational program. It is planned to discuss in this article a general analysis of the functions of administration and supervision, a basic concept as a frame

of reference for providing democracy in administration and supervision, and to give examples of practices which apply this concept to administration and supervision of vocational education in agriculture.

The education of people is considered a primary function of the public schools. We sometimes forget that schools are created and maintained to provide purposeful instruction. The role of the public school is to educate and to train pupils for change and improvement of behavior and for functional relationships with others in a democratic society. School administrative personnel and supervisors as well as teachers often overlook this primary function of the schools and behave as though schools were created primarily to give them a job.

Schools aim to provide education to meet the needs of pupils today from childhood through adult life. In order to serve these instructional needs, schools require teachers, schoolrooms, facilities, equipment and textbooks. This vast program of education must have personnel well-trained to do the work of organizing, maintaining, improving, correlating and evaluating the educational program. Administrators and supervisors are as necessary as teachers to facilitate the instructional program to serve the needs of the people in schools.

Functions of Administration and Supervision

Administration at its best is purely a service and coordinating activity aiming to provide adequate facilities for conducting the educational program. The level of instructional efficiency is contingent not only on the ability and training of teachers but also on the character of administrative organization and general working conditions for teachers and pupils. The role of administration in schools is to facilitate the instructional program through organization, condi-

The article by Supervisor Nesman is the fifth in a series of professional contributions dealing with the *Role of Vocational Education in Farming*. Previous contributions in the series were included in the September, November and December issues for 1947 and in the January 1948 issue.

tions and means to serve best the educational needs of pupils.¹

Supervision is concerned primarily with the improvement of the program of education, and with studying and bettering conditions which surround learning.

The needs of persons taking instruction and the needs of teachers giving the instruction become a focal point for functional supervision. The role of supervision is to provide technical service activities aimed to improve the instruction of the pupils.

Democracy in Administration and Supervision

There is a present emphasis on need for more democracy in our public school program and a new sensitivity for conserving and improving democratic ideals and practices. The school must be a laboratory for the highest level of democratic living. The democratization of the educational process becomes a social responsibility of educational administration and supervision.²

The development of civic democratic competencies of pupils is accomplished through organization and administrative processes that are in themselves democratic in character. Administration and supervision must function democratically in order to facilitate and improve effective democratic ideals and practices for pupils in the public schools.

The term supervision has to some persons the implications of overseeing and giving direction. This concept is not democratic and does not explain the true function of ideal supervision. Supervision is a service activity and should be performed on a consultation basis. Democracy in action assumes that the individual has a share in determining the conditions and the aim of his own work.

The rapid expansion of the public school program has necessitated centralization of administrative authority in su-

¹Improvement of Public Education in Michigan, Michigan Public Education Study Commission, 1944, pp. 236, 237.

²Democracy in School Administration, Koopman, Miel and Misner, pp. 1, 2.

perintendents, principals, supervisors and teachers. This frequently has resulted in authoritative control rather than democratic procedures being used.

It is often considered easier and a saving of time to administer and supervise by using the process of dictatorial direction. Even though a democratic process may be slower at times, the improvement of the attitude of persons participating and the ultimate results often outweigh this loss of time.

Principles that should govern democracy may be stated as follows:³

1. Provide individuals with opportunities to participate in all enterprises that concern them at least on a representative basis.
2. Place responsibility for making decisions with the group rather than with one individual
3. Recognize that leadership is a function of every individual and encourage the exercise of leadership by each person
4. Provide means and organization by which persons may plan together, share experiences and evaluate their achievement

In most states the program of vocational education is administered and supervised by a state board, a state director and state supervisors. The vocational program is usually administered as an integral part of the total educational program of the state with the vocational office operating as a division of the state department of education. Regardless of how the administrative organization is set up in a state, democratic processes may be used in both the administration and supervision. The following practices are given as examples of the democratic processes being used effectively in administration and supervision of vocational education.

Use of Committees

The committee procedure is being effectively used to administer vocational education on a state basis. In our state the head state supervisors of the various divisions of vocational education meet weekly with the assistant superintendent for vocational education to plan, organize, correlate and evaluate the program of vocational education. This procedure of using a committee provides an opportunity for individual participation in administration. Special committees are organized from members of the supervisory staff and assigned work which requires a special development. Special committees are used for promotion of vocational education for rural areas, for promotion of vocational education for urban areas, for teacher education, for cooperative education. By the wide use of committees, opportunity has been given practically all members of the supervisory staff to participate in the administrative program.

Advisory councils are utilized in the state to broaden the base for suggestions and evaluation of the program of vocational education. An over-all advisory council of school administrators meets frequently to make recommendations in

³Democracy in School Administration, Koopman, Miel and Misner, p. 3.

regard to vocational education. Divisional advisory councils made up of representatives in the various areas of vocational education are utilized to make recommendations in regard to specific areas of vocational education. This has brought about a wide participation on the part of lay and professional people in the operation of vocational education in the state.

Supervision in agricultural education on a state basis divides itself into two types of activities: (1) administrative supervision, (2) instructional supervision. Administrative supervision sets up activities concerned with use of federal and state funds to facilitate programs of agricultural education in the local schools. This type of supervision involves counseling and recommendations for approval on contracts and applications for reimbursement for programs of local schools, adequate rooms, facilities, equipment, and qualifying teachers for the program. The second activity is concerned primarily with improvement of instruction. This type of supervision takes up activities concerned with development of courses of instruction, methods of instruction, and in-service help for improvement of the teacher. These two activities of supervision are closely integrated and correlated for agricultural education and they must operate with a focal point on improvement of instruction for the pupils. Some feel that administrative supervision alone is all that is necessary without the component part of instructional supervision. A comprehensive functional program of supervision should do both activities of supervision effectively, the primary aim being that of the improvement of instruction.

Staffs Cooperate in Planning

Agricultural education usually has a staff of supervisors and a staff of teacher trainers. It has been found very important in the planning and evaluating of a program of work in supervision that members of both staffs have the opportunity to participate actively in the planning and evaluating of the activities. Effective practices have provided participation on the part of all persons in Michigan and these practices are submitted herewith for illustrative purposes.

1. Special meetings of the agricultural education staff and teacher training staff are held for the purpose of planning, correlating, effecting joint participation and effective evaluation of the program. Two or three meetings per year are usually set up for this purpose.
2. Joint meetings of the agricultural education staff and the teacher training staff are held on a monthly basis to insure an opportunity for periodic evaluation and discussion of immediate problems that need special attention.
3. The state supervisory staff in agricultural education meets weekly to correlate understanding of the day to day problems of supervision as they relate to local school programs.
4. Workshops and conferences are or-

ganized and planned by the agricultural education staff and the teacher training staff with teachers, administrators and local supervisors to provide in-service programs of improvement of agricultural education. These workshops and conferences are planned jointly by all of the persons participating.

5. Visits are made to the local school community to assist the administrative personnel, supervisors, teachers and others in the planning and evaluating of the program with the objective of improvement of instruction. Supervision is activated almost entirely on a counseling basis and done on the request of the school. The school usually plans for the supervisor's visit.

These practices have been found effective. Many other states are probably using other practices which are effective. A research study of the various practices used by states in effecting outstanding state administration and supervision should be made. How to do effective supervision and administration by utilizing democratic procedures should be thoroughly analyzed. A detailed job analysis of the work of state supervisors of agricultural education would be very helpful in exploring further the role of administration and supervision.

Soil testing clinics

(Continued from Page 145)
ment as the surveyors level, field planning and mapping and hand levels. Many of these were loaned by the county Soil Conservation Service.

A library table was covered with soils bulletins. There were a few free publications for distribution. All of these materials served to occupy the farmer while his soil was being tested.

As for the testing work: the students of vocational agriculture served in scheduled pattern throughout the day as (1) acid testers, (2) phosphorus testers, (3) potash testers, (4) recorders, (5) bottle washers, and (6) librarians. After working from 8:30 a.m. until 4:00 p.m., this was the result: eighteen farmers had been through the clinic with 305 samples tested which represented an estimated 1,000 acres of soil. Six other interested persons visited the clinic throughout the day. In the evening the displays were on exhibit for regularly scheduled veteran classes.

I believe such a project has many values. Besides being a community service, it stimulates thinking on one of our greatest farm problems—the soil, and its fertility maintenance. The preparation for and the work of carrying out the project is one method of creating interest and teaching something specific about soils in the local community to high school students.

It is possible in the future that these one-day agricultural educational events will be sponsored by departments of vocational agriculture to supplement the rather antiquated system of adult evening schools, especially where farmers talk about improved practices but do not carry the instruction into action.

BOOK REVIEWS



A. P. Davidson

FARM MANAGEMENT—

by John D. Black, Marion Clawson, Charles R. Sayre, and Walter W. Wilcox, pp. 1,073, illustrated, published by The Macmillan Co., 1947, list price \$5.50.

This text is written on the senior college level and

should prove of value to teachers of vocational agriculture and other agricultural education leaders as a fundamental reference book in the field of farm management. The text includes six parts:

- Part I—Introduction
- Part II—Systems of Farming
- Part III—Principles and Methods of Analysis
- Part IV—Problems of Management
- Part V—Management by Types of Farming
- Part VI—Finale

This book shows exactly why and how the principles of economics must be combined with principles of soil science, and of feed and feeding for successful farm organization and operation. It shows clearly how the production of crops, milk, meats, poultry, and eggs depends on markets and prices, and how environmental conditions—climate, soils, proximity to the city markets, etc.—influence management decisions. APD

Raising Turkeys, Ducks, Geese, Game Birds, by Morley A. Jull, pp. 467, illustrated, published by McGraw-Hill, list price \$2.80. Up-to-date practical information is offered on all phases of raising and marketing turkeys, ducks, geese, guineas, pigeons, peafowl, quail, pheasants, and other upland game birds, and aquatic game birds. The conservation of wild upland and aquatic game birds is discussed. The material is organized around the specific activities involved in the field. The text is easily read; the approach to problems is practical; and the illustrations are well chosen. This book should prove of value to teachers in the field of vocational agriculture, to county agricultural agents, and to others interested in this phase of agriculture. APD

Principles of Feeding Animals, by Sleeter Bull and W. E. Carroll, pp. 395, illustrated, published by The Interstate Printers and Publishers, list price \$2.75. The 1946 edition has been revised to include the many advances in the field of animal nutrition made during recent years, and a large number of valuable illustrations have been added. The book is designed for use as a text, for use in elementary courses in general feeding, and should also be valuable to the farmer who has not had a technical education in agriculture. The text is easily understood, the subject matter is well chosen, and should prove of value to teachers of vocational agriculture, county agricultural agents, and to institutional on-the-farm instructors. APD

Studies and Investigations

E. B. KNIGHT

Difficulties encountered by teachers during their first year of teaching vocational agriculture*

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J. Bryant Kirkland

THE efficiency of the educational programs conducted by the public schools is dependent upon an adequate supply of competent teachers. This is particularly true of programs of vocational education in agriculture. The most important factor in the program of vocational education in agriculture is the local teacher of vocational agriculture.

The University of Tennessee has served as the State's accepted institution for training teachers of vocational agriculture since 1920. In fulfilling its responsibilities as a teacher training institution, it has accepted as its functions (1) securing an adequate supply of well-trained beginning teachers, (2) providing professional and technical training during the period of pre-service training designed to enable prospective teachers to acquire the abilities necessary for effective teaching, (3) developing and distributing teaching materials to teachers in service, (4) providing continuing education for teachers in service, (5) providing for follow-up of resident instruction for the purpose of checking the effectiveness of the program of pre-employment training, (6) encouraging the improvement of professional and technical

instruction, and (7) conducting research and making studies which contribute to the development of the program of vocational agriculture.

Purpose of Study

This study was made primarily to determine how well the University of Tennessee is performing the second function listed above, namely, how well beginning teachers are being prepared to perform the activities involved in conducting satisfactory programs of vocational agriculture.

The attainment of this purpose necessitated a study of the difficulties with which beginning teachers of vocational agriculture were confronted, a determination of the causes of these difficulties, and suggestions for improving the program in pre-service training in order that similar difficulties could be eliminated or minimized in the future.

Procedures Followed

The procedures used in making the study were quite simple. The writer prepared a tentative list of the professional activities which beginning teachers of vocational agriculture should perform and submitted it to the members of the Department of Agricultural Education of the University of Tennessee. A tentative list of the technical activities was likewise prepared and submitted to the heads of the several departments of technical agriculture of the University of Tennessee for appraisal.

A revised list of professional and technical activities was then prepared and submitted to a fifteen man jury comprised of teachers, supervisors, and

teacher trainees of professional agriculture in Tennessee. The jury selected the activities which were regarded as important for prospective teachers of vocational agriculture to be able to perform before becoming employed. A check list, including the activities which five or more members of the jury considered important for trainees to be able to perform, was then prepared and used in interviewing the teachers included in the study.

All former students of the Department of Agricultural Education of the University of Tennessee residing in the State in the spring of 1944, who graduated during the school years 1937-38 to 1941-42, inclusive, and who taught vocational agriculture one or more years between the school years 1938-39 and 1942-43, inclusive, were included in the study. At the time the study was planned, 106 beginning teachers of vocational agriculture were eligible to be included in the study. The abnormal conditions resulting from the war, however, reduced the potential population of the study to forty-two teachers of vocational agriculture before the final plans for the study had been made.

Professional Difficulties

The study of the difficulties encountered by beginning teachers of vocational agriculture in performing the professional activities selected by the jury revealed that, on the average, approximately one-third of the teachers reported some degree of difficulty with or expressed inability in performing the 188 activities included in the nine areas. The

*Based on Ph.D. study at the Ohio State University.

TABLE I—Summary of the Participation and the Ability of Beginning Teachers of Vocational Agriculture to Perform the Activities Included in the Professional Area

| | AREA | | | | | | | | |
|--|------------------------------|-----------------|-----------------------------|----------------------|---------------|-------------------------------|-------------------------|---------------------|------------|
| | Long-time and Annual Program | All-day Program | Out-of-School Youth Program | Adult Farmer Program | Relationships | Physical Plant and Facilities | Follow-up and Placement | Records and Reports | Evaluation |
| Per cent of teachers reporting no difficulty in performing the activities..... | 21.6 | 50.3 | 26.4 | 44.7 | 79.8 | 43.2 | 9.0 | 51.7 | 58.5 |
| Per cent of teachers reporting ability to perform the activities..... | 42.5 | 6.4 | 57.4 | 20.2 | 13.6 | .8 | 80.5 | 36.1 | 19.6 |
| Per cent of teachers reporting difficulty in performing the activities..... | 23.3 | 42.7 | 14.8 | 35.1 | 6.6 | 56.0 | 7.2 | 11.9 | 21.4 |
| Per cent of teachers reporting inability..... | 12.6 | .6 | 1.4 | .0 | .0 | .0 | 3.3 | .3 | .5 |
| TOTAL..... | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number of activities included..... | 19 | 88 | 10 | 8 | 11 | 6 | 6 | 23 | 19 |
| Per cent of teachers performing the activities..... | 44.9 | 93.0 | 41.2 | 79.8 | 86.4 | 99.2 | 16.2 | 63.6 | 79.9 |
| Per cent of teachers reporting difficulty with or inability to perform the activities..... | 35.9 | 43.3 | 16.2 | 35.1 | 6.6 | 56.0 | 10.5 | 12.2 | 21.9 |

highest percentage of teachers reported difficulty with or inability in formulating and executing long-time and annual programs, organizing and conducting programs for all-day students, organizing and conducting programs for adult farmers, and providing and maintaining adequate physical plants and equipment.

Table I shows the percentage of teachers who encountered difficulty in performing the professional activities pertaining to the various phases of the program of vocational agriculture.

The comparative ability of the beginning teachers of vocational agriculture in performing the activities in the various professional areas is further shown in Table II. It was found that one-third or more of the teachers reported some degree of difficulty with or felt incapable of performing 31 or more per cent of the activities in five of the nine professional areas. One-third or more of the teachers reported difficulty with or inability in performing 50 or more per cent of the activities in the areas of all-day program, adult farmer program, and physical plant and facilities.

In the main, the teachers attributed the difficulties encountered in the professional areas to inadequate instruction and to lack of or limited participating experience in essential activities during the program of pre-service training. The majority of the teachers listed lack of participation in organizing and conducting all-day programs, selecting and conducting farming programs, organizing and conducting adult farmer programs, and procuring adequate physical plants and equipment as the cause of the difficulties encountered.

The teachers were generous in offering suggestions for improving the professional program in pre-service training of the University of Tennessee. It was felt that a knowledge of the causes of the difficulties encountered, together with suggestions for improving the professional program in pre-service training would provide a valid, if only partial, basis for making the adjustments necessary for the elimination of similar difficulties on the part of future prospective teachers of vocational agriculture.

Increasing trainee participation in planning long-time and annual programs, in selecting, initiating, and conducting farming programs, in preparing teaching calendars for all-day students, in promoting Future Farmers of America activities, and in procuring adequate physical plants and equipment, were suggested by the greatest number of teachers for improving the professional program in pre-service training. Providing additional instruction in certain phases of the professional program was also suggested by a considerable number of the teachers.

It was significant to note that the greatest number of suggestions for improving the professional program in pre-service training relate to the areas in which the highest percentage of teachers reported difficulty or inability during the first year of teaching.

Technical Needs

A study of the technical program in pre-service training revealed that, on the

TABLE II—Summary of the Professional Activities with Which One-third or More of the Forty-two Beginning Teachers of Vocational Agriculture Reported Difficulty or Inability, by Areas

| AREA | Activities in the areas | Activities in which one-third or more teachers reported difficulty or inability | |
|-------------------------------------|-------------------------|---|----------|
| | Number | Number | Per cent |
| Long-time and annual program..... | 19 | 9 | 47.3 |
| All-day program | 88 | 58 | 65.9 |
| Out-of-school youth program..... | 10 | 0 | .0 |
| Adult farmer program..... | 8 | 4 | 50.0 |
| Relationships | 10 | 0 | .0 |
| Physical plants and facilities..... | 6 | 5 | 83.3 |
| Follow-up and placement..... | 5 | 0 | .0 |
| Records and reports..... | 23 | 1 | 4.3 |
| Evaluation | 19 | 6 | 31.5 |
| TOTAL..... | 188 | 87 | 46.2 |

average, 21.6 per cent of the beginning teachers of vocational agriculture encountered some degree of difficulty with or felt incapable of performing the activities in the several areas of technical agriculture. This percentage is somewhat lower than that reported in the professional areas.

The percentage of teachers reporting difficulty with or inability to perform the

percentage of teachers reported difficulty with or expressed inability to perform the activities in the agricultural engineering area. The lowest percentage occurred in the field crops area. It is interesting to observe the comparatively low percentage of teacher participation in the areas of technical agriculture. In no area did as many as 50 per cent of the teachers perform the various activities.

TABLE III—Summary of the Participation and the Ability of Beginning Teachers of Vocational Agriculture in Performing the Activities in the Areas of Technical Agriculture

| | AREA | | | | |
|--|-----------------------|-------------|----------|--------------|--------------------------|
| | Livestock and Poultry | Field Crops | Agronomy | Horticulture | Agricultural Engineering |
| Per cent of teachers reporting no difficulty in performing the activities..... | 37.3 | 33.1 | 27.6 | 40.4 | 32.5 |
| Per cent of teachers reporting ability to perform the activities..... | 42.7 | 49.4 | 53.7 | 39.4 | 43.5 |
| Per cent of teachers reporting difficulty in performing the activities..... | 10.0 | 4.7 | 6.1 | 8.6 | 6.5 |
| Per cent of teachers reporting inability to perform the activities..... | 10.0 | 12.8 | 12.6 | 11.6 | 17.5 |
| TOTAL..... | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number of activities..... | 88 | 65 | 35 | 91 | 255 |
| Per cent of teachers performing the activities..... | 47.3 | 37.8 | 33.7 | 49.0 | 39.0 |
| Per cent of teachers reporting difficulty with or inability to perform the activities..... | 20.0 | 17.5 | 18.7 | 20.2 | 24.0 |

activities in the areas of technical agriculture ranged from 17.5 to 24.0. A summary of the participation and the ability of the teachers in performing the activities in the various areas of technical agriculture is shown in Table III.

It will be noted that the highest per-

centage of the group encountered some degree of difficulty with or expressed inability in performing 123, or 23 per cent, of the 534 activities selected by the jury in the several areas of technical agriculture. This percentage is

(Continued on Page 157)

TABLE IV.—Summary of the Technical Activities in Which One-third or More of the Beginning Teachers of Vocational Agriculture Reported Difficulty or Inability, by Areas

| AREA | Activities in the area | Activities in which one-third or more teachers reported difficulty or inability | |
|--------------------------------|------------------------|---|----------|
| | Number | Number | Per cent |
| Agricultural Engineering | 255 | 66 | 25.8 |
| Agronomy | 35 | 8 | 22.8 |
| Horticulture | 91 | 19 | 20.8 |
| Field crops | 65 | 13 | 20.0 |
| Livestock and poultry | 88 | 17 | 19.3 |
| TOTAL..... | 534 | 123 | 23.0 |

Farm Mechanics

R. W. CLINE

Township high school in New Jersey gets building for vocational agriculture

WM. S. TWICHELL, Supervising Principal, Central High School, Pennington, New Jersey

AN agricultural unit consisting of a classroom 20' x 31' equipped with a demonstration desk, an instructor's office, toilets for both sexes, and a large farm shop 76' x 31' is being erected at Central High School of Hopewell Township, Pennington, to house New Jersey's newest department of vocational agriculture.

The story of its evolution may be of some help to those who are faced with the problem of providing agricultural facilities under present building difficulties. A short historical statement may be appropriate before launching into the narrative. In 1939 a proposed bond issue to build an addition to the high school to provide a cafeteria, a homemaking unit, a general industrial arts shop, a library, and an agricultural shop was rejected decisively by the voters of the district, although the facilities were badly needed. Discouragement over the decisive negative vote and the outbreak of World War II kept the project dormant.

Local Agencies Cooperate

In 1945 the board of education decided to again publicize the need for the facilities. Individual members of the board arranged with organizations of which they were also active members, to have the proposition presented and discussed. Woman's Clubs, the Grange, the Lions Club, Y.M.C.A. groups, and church groups responded, and the topic became the subject for at least one of their regular meetings. Later, large public meetings, one of which was sponsored by the combined Woman's Clubs of Pennington, another by the Titusville P.T.A., and another by the board of education, were held.

At the meetings, the board members were in attendance, and the program was developed by three members of the staff: the high school principal, the secretary of the board of education, and the supervising principal. This method of presentation proved to be very effective. As chairman, the president of the board of education called on the high school principal, who explained the courses which were offered, their purposes, and the areas in which the present program was deficient. As the financial officer of the board, the secretary discussed such matters as taxable wealth, bonds outstanding and their maturity dates, the experience of other districts in selling bonds at low rates (often under 2 per cent interest), and the fact that the district had the tax leeway to build the proposed facilities. Stereopticon slides pre-

pared by the secretary presented the figures very clearly and forcefully and added much to her presentation of a difficult phase of the problem.

Graphs and charts had been prepared by the supervisor to show the range in abilities of pupils, and how many pupils of low ability were forced into difficult subjects for which they had little interest, and in which success was largely impossible. He also showed that most pupils who dropped out of high school did so because their educational needs were not being met.

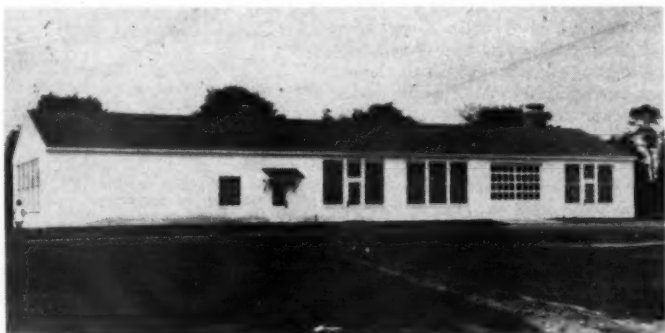
All meetings were well attended despite rain, fog, and cold weather. On occasions, an assistant commissioner of secondary education, the county super-

building program. The brochure was organized under four headings: "Here is the building that is needed"; "Here are the rooms it will provide"; "Here is the program it will make possible"; and "Here are the financial facts." Together with a letter from the president of the board of education, the brochure was mailed to every voter in the school district.

War Surplus Building Sought

About this time, an interested citizen came forward with the suggestion that it might be possible for the board to secure a surplus building or buildings from the Federal Government under the Veterans Educational Facilities Program and explained how to proceed. Application was made by the board and efforts were made to establish a "justification of need," the first form required. It became apparent that industrial arts, not being a vocational subject, could not be included in a veterans' program.

In 1945 the vocational division of the state department of education, at the invitation of the board of education, had made a survey of the need for agricultural instruction. This survey, which estimated that in the neighborhood of forty boys would be interested in pursuing agriculture as a course in high school, now became of tremendous importance because it established the fact that Pen-



The new buildings at Pennington include a classroom, shop, lavatories, and an office.

intendent, and a representative from the office of the state supervisor of vocational agriculture were present by special invitation and spoke in their respective fields.

Application was made to the Bureau of Community Facilities of the Federal Works Agency for funds to plan for three projects. The funds are a grant until such time as the project is built and then the amount advanced for planning must be repaid to the Federal Government.

Project number one, because it was most needed and could be built as a separate unit of inexpensive materials, was a building to house an agricultural shop and classroom and a general industrial arts shop. Expectations were that it would be built of cinder block which would become available sooner than the usual school building materials.

All hands combined to develop a brochure which would explain the proposed building. This was the first step in the

nington was the center of a large, rich agricultural area about forty miles in diameter, in which no vocational agriculture was taught. The need of many veterans within this area for training, instruction, and supervision was a vital point in securing approval of the project. Once the need was established, a "finding" for a building to house a farm shop, and a classroom for instruction in agriculture was issued to the board of education.

A wait followed while the machinery was put in motion at F. W. A. to find a suitable building which had been declared surplus. The problem was complicated by the state building inspector's requirement for twelve-foot ceilings in shop and classroom and by the need for a shop which was wider than most surplus buildings. The board was invited to inspect two portable prefabricated buildings at Wildwood Naval Airport and together with the architect, representatives of the state department of education, and

the supervising principal, six members of the board of education journeyed to Wildwood, inspected the buildings, and accepted them.

A conference with the F.W.A. officials developed that it would cost about \$8,000 more than had been allotted by the Federal Government to tear the buildings down, transport them to the site, and re-erect them according to the architect's plan. Additional expenditures which the board must assume for legal, architectural and engineering fees, bringing utilities to the building, preparing the site, and laying roads and sidewalks would cost another \$10,000. April 3rd was set as a date to vote upon a bond issue for \$18,000 plus \$7,992 to run the agricultural program for the first year. Several days before April 3rd, we received notice the buildings at Wildwood were no longer available. However, there was nothing to do but go ahead with the special election, as four polling places with their workers had been arranged for by the board's secretary, and with the aid of the attorney, notices had been published and ballots printed. In the few days available, every effort was made to acquaint the public with the proposition through newspaper articles, mimeographed statements distributed through the children, and announcements in meetings wherever a hearing could be gained. The bond issue was approved and the amount for the first year's operation was voted for by approximately three to one.

Before accepting a community building located at East Hartford as being suitable, the board rejected buildings at Brentwood, L. I., and Camp Shanks as not being usable. The East Hartford building was not available for several weeks. Until then the board was in a very embarrassing position, having secured the right to sell bonds and yet not having a building to erect.

Value Estimated at \$40,000

It was found that the new building could be dismantled, transported and erected for approximately \$1,000 more than the buildings at Wildwood. The board's contribution of \$9,000 is being spent on footings, concrete flooring, chimneys, and brick filling to fire-proof partitions. When complete, it is estimated the building will be worth about \$40,000.

The cooperation of all board of education members, the vocational division of the state department of education and of local school officers was complete in this undertaking. Once the finding was issued, F.W.A. did everything in its power to carry the project to completion.

The building is now being occupied and Mr. S. A. Gilberg, formerly assistant at Flemington high school, has been elected to the new position. Upon his shoulders will rest the responsibility for inaugurating a four-year course in vocational agriculture for the 38 all-day students who have matriculated for the courses, a veterans' training program, and an adult evening course in farm machinery repair during the current year.

Vocational agriculture and farm mechanization*

D. C. LAVERGNE, State Supervisor, Baton Rouge, Louisiana



D. C. Lavergne

the determination of the future of agriculture.

Many of our soils are of low fertility and they erode easily. We, in fact, have farm resources which are very difficult to manage. But if we could eliminate the current misuse, there seems to be unlimited possibilities for the development of a balanced and efficient agriculture.

Increased Mechanization

Low incomes and increasing population probably account for the fact that the amount of machinery on the Southern farm has scarcely doubled in the past one hundred years; whereas, for the rest of the country, it has probably increased four or five hundred per cent. It is extremely difficult for any industry to keep from sliding lower and lower if its competitors are using profitably the energy of power resources to add to the power of its workers. It is only natural, on being faced with limited land because of existing population numbers and limited capital, that we have gone into a normal development of farming systems centered around high-valued, labor-intensive enterprises, particularly since certain of these such as cotton, tobacco, cane, and fruit are so well suited to those conditions as well as to our climate. Many influences have caused us in

*Excerpts from an address at a meeting of the National Cotton Council, Stoneville, Mississippi.

TODAY we are faced with many problems of a complex nature in agriculture. No one, I am sure, feels that farm mechanization alone will solve all our problems. However, no one would deny the fact that it is one of the most influential factors in

our simple fashion to try to take advantage of the situation by producing in the main a single crop—cotton. Now just as we find ourselves in a relatively favorable situation, we are faced with the development of synthetic fibers threatening to remove the main source of income for half of our farmers in the South. The effect will naturally be still lower incomes and lowered values for investments in cotton farms, gins, warehouses, and mills unless compensatory gains can be made in the efficiency with which cotton is produced, processed, and distributed. There seems to be only one answer—mechanization!

We here have remained agricultural but we know that our region will not support its people at the proper level of living until its industrial resources are as fully utilized as those of its soil. This must be the primary tenet for the balancing of agriculture and industry in the South. There is definitely a place for those so called "economic extras" in our economy if they are assisted in acquiring essential skills and are brought in closer contact with industrial development. There is also an opportunity for many of these people in service type occupations, particularly in and near towns, in providing services needed to care for and operate the machinery and equipment, both of the farm and of the household which our people with a higher income are bound to secure.

What, then, is the responsibility of vocational agriculture to this type of farming situation? The mechanical farm will require more land and capital; therefore, it will require more competent management. The farm worker will need more skill in handling the machinery and safety education will directly affect his success. Labor will have to accept more responsibility in the field. There will be fewer workers but the return per worker will be increased.

(Continued on Page 158)



Willard Foley, Assumption parish cane farmer, cultivates 320 acres through the use of modern farm machinery. Shown here in jeep he uses for farm transportation overseeing two of his tractor operators as they disc ground.

Future Farmers of America

A. W. TENNEY

F.F.A. fair promotes school-community cooperation

S. A. HOLDRIDGE, Teacher, Madison, Connecticut

FOR NINE consecutive years the Guilford-Madison Chapter of the Future Farmers of America has held an agricultural fair on the athletic field and in the gymnasium of the Hand Consolidated School at Madison, Connecticut. Incidentally, this is the only incorporated Future Farmer's Fair in New England.

The Guilford-Madison Chapter is made up of boys studying vocational agriculture in the Guilford High School in Guilford and those taking the course at the Hand High School in Madison. These teaching centers are five miles apart, both are situated on Long Island Sound between New Haven and New London. This dual department was organized in the fall of 1922 and was in charge of Mr. E. Selden Clark, now of the Ray High School in Moodus, for the first nine years. The writer succeeded Mr. Clark in 1931 and has been in charge ever since.

First Fair Held in 1939

The first fair was held on October 20, 1939. Several factors contributed to its inception. The Guilford Fair Association of the Town of Guilford held its 77th Annual Fair in September 1937. A hurricane of major proportions swept across Connecticut and other parts of New England in September of 1938. The Guilford Green, where the fair is held, was a shambles of fallen elms. No fair could be held. In 1939 Guilford celebrated the 300th anniversary of its founding. This replaced the fair for that year.

After a great deal of discussion the local chapters voted to put on an agricultural fair. The chapter had \$7.37 in its treasury in September 1939 when it decided to hold its first fair. The following reasons for holding the fair were ad-

vanced by those particularly interested in the project: (1) To give the local communities an agricultural fair which otherwise might not have one for several years, (2) To enable chapter members to get first-hand experience in organizing and conducting a fair, (3) To further a closer relationship between the chapter and the community.

After the final vote was taken, every member soon became interested in the new undertaking. There were many decisions to make. The establishment of a policy in the general conduct of the fair was debated at great length. While those matters were simmering, committees were set up, almost exclusively on a voluntary basis, each member being placed on the committee that he liked best. Some of the decisions that had to be made were:

- (1) Date to have the fair
- (2) Number of departments to have
- (3) Prizes to be offered
- (4) Kind of premium list to print
- (5) Where to get judges
- (6) Type of insurance to carry
- (7) Admission fee to charge
- (8) Concessions to have
- (9) Whether or not to have a parade
- (10) Kind of entertainment
- (11) Entry fees to be charged

Because the tri-centennial exercises commemorating the founding of Guilford were held in that town and out of deference for such a well established fair as conducted by the Guilford Fair Association, it was decided to hold the fair in Madison, using the large new gymnasium for the poultry show and other exhibits. An adjoining field was used for all field events. Through the generosity and cooperation of the Guilford Fair Association all equipment used was

loaned free of charge. Fathers of chapter members and other public-spirited citizens aided by loaning trucks and tractors. A fine spirit of community cooperation crystallized in that first month and has carried over through the nine years that the fair has been held.

The first fair opened officially at 10:00 A. M. on October 20, 1939 with a mile long parade. The line of march of the first parade has been followed with some variations in all nine fairs. The line formation was as follows: police, color bearers, two boys carrying chapter banner, cavalcade, Hand High School Band, Madison Fire Department, Girl Scouts, yokes of oxen, Boy Scouts, Cub Scouts, trimmed carts and bicycles, home made tractors, decorated automobiles and business men's teams and automobiles.

No Interruption During War

Although the first fair was comparatively small and even though it was designed as a substitute for another fair, the benefits derived by the chapter members in assembling and displaying their products and those of the community seemed so great that it was decided to hold a second fair, then a third, then came the war. Many fairs for very good reasons discontinued holding their annual shows. Many former members were contacted who were in the service, and each and everyone hoped that somehow or other the fair could keep going. One soldier wrote from New Guinea that the fair was one of the things he felt that he was fighting for and he hoped that when he came home that that would be one of the things he would find still going. Consequently, because of its great educational value to the boys that were still in high school and in respect for the many who were away that had helped get it started, it was decided to keep going. It was a difficult time but the fair kept on growing. New features were added, the prizes were increased, the attendance gradually increased, each year with an attendance of about 2500 people this year breaking all records. Equipment has been added each year, most of it being made in the school shop during the winter months. At this writing, the 1947 fair accounts have not been completed but the chapter will probably have about \$2,000 in the bank and over \$500 invested in equipment.



Exhibits at the F. F. A. Fair include poultry, livestock, vegetables, and flowers.



Team and tractor drawing contests appeal to persons attending the annual fair.

Because of the large prizes paid in late years and since the main source of income is limited to gate receipts a large yearly profit is not realized.

To give a better idea as to its present scope, a list of prizes offered at the 1947 fair was as follows:

Vocational agricultural education exhibits:

- (1) \$20.00, (2) \$15.00, (3) \$12.50, (4) \$10.00, (5) \$7.50.

Any department of vocational agriculture not winning one of the above prizes received an award of \$5.00.

Six different chapters put on exhibits. The Tri-Ag Chapter of Wilimantic has put on an exhibit each year. The Housatonic Chapter of Falls Village has had an exhibit each year since they were organized. These two chapters have to travel about 50 and 75 miles respectively.

The Grange exhibit participated in by eight Granges this year were excellent in quality and arrangement. Prizes paid were (1) \$30.00, (2) \$25.00, (3) \$20.00, (4) \$15.00, (5) \$12.50. Any Grange not winning one of the above prizes was awarded \$10.00.

The poultry, livestock, vegetable and flowers have been increased so that they are on a par with the large fairs in the state. The home made tractor drawing contest has been opened up to anyone and this year had 11 entries, the prizes paid were (1) \$20.00, (2) \$15.00, (3) \$10.00, (4) \$7.50, (5) \$5.00.

The horse drawing contest attracts teams from all parts of Connecticut and southern Massachusetts.

There are two divisions to this contest, the first for teams under 3000 lbs. (1) \$20.00, (2) \$15.00, (3) \$12.50, (4) \$10.00, (5) 7.50. The other is a free for all, any weight, (1) \$50.00, (2) \$30.00, (3) \$20.00, (4) \$10.00, (5) \$5.00.

Horse Show Added

This year a horse show was started for the first time and the free for all horse drawing contest was held under lights beginning at 8:00 o'clock in the evening. All exhibits were taken out of the gymnasium at 5:00 P. M. and a talent show was held at 8:00 P. M. Every year except the first, an old fashioned dance has been held.

The fair takes a tremendous lot of work and planning. It runs well if each committee does its job efficiently but if one or more fall down on the job, then it becomes hectic. There are always many last minute things that have to be decided on the spur of the moment even though special care has been taken in planning. For example, this year the person that had been engaged to furnish the amplifying system did not show up until real late. It prevented the smooth running of the horse show and the power saw demonstration conducted by State Forestry officials. In spite of all these complications, and they are bound to occur, the good derived by the students from conducting an enterprise of high calibre adds a great deal to their education and we hope raises agriculture to a higher plane in Connecticut.

Difficulties encountered by teachers

(Continued from Page 153)

one-half that reported by the teachers in performing the activities in the professional areas.

Table IV shows that one-third or more of the teachers experienced difficulty with or expressed inability in performing slightly more than 25 per cent of the activities included in the agricultural engineering area. The lowest percentage of activities with which one-third or more of the teachers reported difficulty or inability occurred in the livestock and poultry area. However, there was no significant difference in the ability of the teachers in performing the activities in the areas of livestock and poultry, field crops, and agronomy.

Looking Towards Improvement

In view of the findings of this study, the writer offers the following recommendations for the improvement of the program in pre-service training as a means of minimizing the difficulties of beginning teachers of vocational agriculture in the future:

1. That the Department of Agricultural Education of the University of Tennessee re-examine its professional courses and its provisions for trainees to acquire the participating experiences which will enable them to become more proficient in performing the professional activities involved in teaching vocational agriculture.

This study revealed a need for more trainee participation in many of the essential professional activities. The frequency and seriousness of the difficulties encountered by the teachers in performing the activities indicate a need for strengthening some phases of the instructional program.

2. That the Department of Agricultural Education in cooperation with the departments of technical agriculture of the University of Tennessee develop a list of technical abilities which are essential for prospective teachers of vocational agriculture to possess. If such a list of abilities is to furnish the pattern for formulating the technical program in pre-service training, it will be necessary for the resident teaching staff of the College of Agriculture to re-examine the list of abilities periodically and modify it as changes occur in the agriculture of the State.

3. That the Department of Agricultural Education initiate, through the curriculum committee of the College of Agriculture, an evaluation of the present program in pre-service training. Such an evaluation should be made in terms of the abilities which are considered essential for prospective teachers of vocational agriculture to possess.

4. That the Department of Agricultural Education encourage the several departments of technical agriculture to modify certain courses, introduce needed new courses, and employ teaching methods which will result in a higher degree of efficiency on the part of prospective teachers of vocational agriculture.

The teachers suggested that each department of technical agriculture organize service courses especially designed to meet the needs of students majoring in other areas. The study revealed a need for supplementing the classroom instruction with more laboratory studies and field trips.

3. That the Department of Agricultural Education initiate an improved program of guidance for students.

The writer suggests that a check list of essential activities be prepared and distributed to each student upon enrolling in the Department of Agricultural Education. Each student should then be asked to make a self-evaluation of his ability to perform the various activities. The resulting evaluation could then be used by the adviser in guiding the student in selecting the courses in technical agriculture and in planning his farm experience.

6. That the Department of Agricultural Education expand its present offerings of professional courses in order that in-service teachers may attain professional improvement.

It would be well to consider supplementing the regular courses of six weeks duration with courses of three weeks duration during the summer quarter. Providing intensive instruction through off-campus service courses for the teachers who are unable to attend resident courses should be encouraged.

7. That the Department of Agricultural Education enlist the cooperation of the departments of technical agriculture in providing the instruction needed to improve the level of proficiency of in-service teachers of vocational agriculture.

It seems desirable to provide instruction in technical agriculture through service courses conducted off-campus. Such courses might be of not more than one week's duration and conducted during the summer months. An expression of the needs of the potential enrollees should be considered in planning the instructional program for in-service teachers of vocational agriculture.

8. That graduate students be encouraged to supplement this study with studies of the abilities and understandings possessed by beginning teachers of vocational agriculture in other professional and technical areas.

9. That the Department of Agricultural Education provide sufficient personnel to follow-up its graduates during their first year of teaching. Such a plan should not only be of value in helping the beginning teachers solve their problems, but should also point up needed adjustments in the professional program in pre-service training.

10. That the Department of Agricultural Education initiate a plan whereby the resident instructors in areas of technical agriculture will make follow-up visits to a representative number of the graduates of the College of Agriculture. Such visits should result in technical assistance to the graduates in their respective positions and should also provide a basis for improving the program of pre-service and in-service training.

11. That beginning teachers of vocational agriculture be encouraged to familiarize the respective departments of the College of Agriculture with the difficulties with which they encounter and offer suggestions for improving the pre-service training program.

12. That teachers of vocational agriculture aid the Department of Agricultural Education in recruiting prospective teachers of vocational agriculture with broad farm experience which is basic to the ability to become successful teachers of vocational agriculture.

The New Market, Alabama, F.F.A. chapter has purchased an Argus C-3 camera and plans to make colored slides. The chapter also owns a motion picture projector, a slide and film strip projector, and a Da-Lite screen.

Our leadership



D. W. Skelton

THIS month we are giving recognition to the increasing number of subject matter specialists becoming associated with the in-service phase of the program in agricultural education. D. W. Skelton and J. I. Thompson are representative of this group.

Mr. D. W. Skelton carries the title Coordinator of Research Information at the Mississippi State College and spends a major portion of his time in compiling information for teachers of vocational agriculture, and particularly for instructors of veterans at present. He is now teaching a course in subject matter to juniors majoring in agricultural education. The office is maintained by the State Experiment Station in cooperation with the State Board for Vocational Education.

Mr. Skelton received the B.S. degree in Agricultural Education at Mississippi State College in 1931 and the Master of Science degree at Mississippi State in 1943. He taught vocational agriculture for nearly ten years at Heidelberg, Mississippi, and during the last two years as vocational teacher did some supervisory work, especially with Negro vocational teachers in seven counties surrounding his school.

In 1941 Mr. Skelton returned to the State College as Assistant Subject-Matter Specialist and as a teacher trainer in the department of agricultural education. He succeeded Mr. H. O. West to his present position in 1944.

* * * *



J. I. Thompson

J. I. Thompson joined the staff of the California Bureau of Agricultural Education located at California State College, San Luis Obispo, as a livestock specialist in 1931. His principal work has been to assist the teachers of vocational agriculture in planning and develop-

ing strong livestock programs for members of their Future Farmers of America chapters. This requires direct contact with each school, visiting F.F.A. boys on their home farms, participating in sectional and regional meetings for teachers, attending field days, fairs, and similar programs.

Mr. Thompson was born on an Iowa farm and attended the Iowa State College as a contemporary of such men as Henry A. Wallace, Dean H. H. Kildee, the latter his roommate and fraternity brother, and many others who became

Vocational agriculture can use radio

FORREST S. AUMILLER, County Adviser for Vocational Agriculture, Wyoming and Sullivan Counties, Pennsylvania



A radio broadcast in the series on vocational agriculture. Station WGBI, Scranton, Pa. Participating in the broadcast are the author, left, Bruce Jayner, F. F. A. member and his teacher J. F. Powell of Tunkhannock.

RESULTS derived from a program of vocational agriculture are a source of news. Local papers are usually willing to carry articles dealing with local situations but in many cases the overall picture of vocational agriculture cannot be measured except by bringing to the public a larger segment of instruction dealing with state or area groups. Radio coverage is ideal for this purpose, and when carefully planned, the papers can be used to publicize the radio programs as they are presented. The program soon becomes a habit to the listening audience as, for example, the "National Farm and Home Hour." Radio stations are looking for good programs. One important point is usually emphasized—one person must assume responsibility for gathering news, planning programs, writing script, and having charge of the presentation. This in itself is a big job. The amount of time and preparation required varies with the type of program, but the success of any program often hinges on the thoroughness in preparation.

Ten minutes usually is about the maximum allowed for any special feature. In a longer program diversity may be obtained by transcriptions, introduc-

notable in agriculture. He graduated in 1910.

From 1910 to 1920 Mr. Thompson was on the staff of the University of California at Davis, as head of the Animal Husbandry department. In 1918 he went to Kansas State College on an exchange professorship. From 1920 to 1931 he was the manager of a large purebred livestock and horticulture ranch near Davis. The stock included registered Polands, Hampshire sheep, Shorthorn cattle and saddle horses.

tions, and short special features. In the programs which we provide, "Flashes" and "Champions" are used to make possible the presentation of special happenings and to give credit to outstanding boys from the area. Since we have the pick of 3000 F.F.A. members, plus an equal number of homemaking girls, these features are especially interesting. The radio audience sees vocational education at its best.

Emphasis is placed upon equal participation between homemaking education and vocational agriculture, and an effort is made to secure equal area participation. Each year the central theme is changed to a topic of current interest, and all the programs are related to this theme. The theme for 1947 was "Practical Training for Peacetime America."

Farm mechanization

(Continued from Page 155)

Departments of vocational agriculture in the public schools must provide practical training in farm mechanics, farm buildings, and farm management in order for the full advantages of mechanization to take effect in our farm life of the future. It will require even higher caliber teachers with an understanding of the job ahead. There will probably be many delays, but the development of an efficient agriculture is inevitable. We feel, then, in vocational education, that we have an "opportunity to cooperate with the inevitable."

We recognize that these unprecedented problems of the future offer a challenge to vocational education in agriculture which will require an expansion of training programs far in excess of those now available. It is the type of challenge which we welcome.

